

 <div style="text-align: center;"> <b>Financial Assistance Award</b>   <b>DENALI COMMISSION</b>          510 L Street, Suite 410          Anchorage, Alaska 99501          (907) 271-1414 (phone)          (907) 271-1415 (fax)          www.denali.gov       </div>		<b>Award Number</b>	01467-05		
		<b>Award Title</b>	Sanitation Energy Efficiency		
		<b>Performance Period</b>	September 1, 2014 through December 31, 2019		
<b>Authority</b> 112 Stat 1854	<b>CFDA Number</b> 90.100	<b><u>Recipient Organization &amp; Address</u></b> Alaska Native Tribal Health Consortium Inc. 4000 Ambassador Dr Alaska Native Tribal Health Consortium  <b>Phone:</b> [NO DATA] <b>Recipient DUNS #</b> 071375658 <b>TIN #</b> 920162721			
<b>Denali Commission Finance Officer Certification</b>					
<b><u>Cost Share Distribution Table</u></b>					
Accounting Code	New Funding		Prior Period Funding		Total
	Denali Commission	Other Contributors	Denali Commission	Other Contributors	
95670000	\$500,000.00		\$3,147,636.00		\$3,647,636.00
	\$0.00		\$0.00		\$0.00
	\$0.00		\$0.00		\$0.00
	\$0.00		\$0.00		\$0.00
	\$0.00		\$0.00		\$0.00
		\$0.00		\$0.00	\$0.00
		\$0.00		\$0.00	\$0.00
		\$0.00		\$0.00	\$0.00
		\$0.00		\$0.00	\$0.00
<b>Total</b>	<b>\$500,000.00</b>	<b>\$0.00</b>	<b>\$3,147,636.00</b>	<b>\$0.00</b>	<b>\$3,647,636.00</b>
This Financial Assistance Award approved by the Federal Co-Chair of the Denali Commission constitutes an obligation of federal funding.					
<b>Signature of Authorized Official - Denali Commission</b>  Electronically Signed		<b>Typed Name and Title</b> Mr. Jay Farmwald Director of Programs		<b>Date</b> 04/16/2018	



## AWARD ATTACHMENTS

Alaska Native Tribal Health Consortium Inc.

01467-05

- 
1. Terms and Conditions
  2. Attachment A
  3. Budget and Funding Summary



***Financial Assistance Award 1467***  
***Between the Denali Commission and Alaska Native Tribal Health Consortium***  
***For Sanitation Energy Efficiency***  
***Amendment 5***  
*06 April 2018*

All changes to the award conditions are noted below.

1. Increase funding by \$500,000. See attached Budget and Funding Summary dated 06 April 2018.
2. Replace Attachment A with a new Attachment A dated 06 April 2018.
3. Extend the period of performance to December 31, 2019.



**Attachment A**  
**To**  
**Financial Assistance Award #1467**  
**Between the Denali Commission and ANTHC for**  
**Sanitation Energy Efficiency**

*06 April 2018*

## **1. Project Summary**

This amendment updates scope, schedule and budget for Award 1467, *Sanitation Energy Efficiency*. This amendment restates the original scope, three previous scope amendments, and adds additional scope.

The work funded under this award includes gathering and compiling baseline energy use and cost data for sanitation facility systems in rural Alaska, implementing energy efficiency and conservation measures identified in the energy audits, collecting subsequent energy use and cost data for comparison after implementation, completing the design of a diesel heat recovery system in Holy Cross to benefit the water treatment plant, conducting an assessment of energy issues related to the variety of residential water and sewer service connections currently in use across rural Alaska, conducting heat recovery studies in at least 7 community owned power systems and upgrading wind to heat systems.

## **WORK PLAN**

### **Energy Audits**

**Scope:** Conduct investment grade energy audits for the sanitation systems in at least the following 49 communities:

Akiachak, Akutan, Aniak, Buckland, Chenega Bay, Chignik Bay, Chignik Lake, Chignik Lagoon, Ekwok, Fort Yukon, Galena, Gulkana, Hooper Bay, Igiugig, Kake, Kasigluk, Klukwan Kotlik, Kotzebue, Kwethluk, Manokotak, McGrath, Mekoryuk, Mountain Village, Napakiak, Nikolai, Noorvik, Noatak, Port Lions, Quinhagak, Rampart, Saint Mary's, Scammon Bay, Selawik, Shishmaref, Shungnak, Tanacross, Tanana, Tatitlek, Tetlin, Togiak, Unalakleet, White Mountain, and six Lake and Peninsula Borough Communities.

**Deliverables:** The energy audits will be investment grade and inform future implementation efforts on specific improvements necessary for each sanitation system as well as cost and savings estimates for all identified Energy Efficiency Measures (EEMs) and Energy Conservation Measures (ECMs).

**Budget:** The Commission is making \$475,000 available for energy audits. The average cost of an audit including direct labor, pool labor, travel and indirect costs is approximately \$10,000. \$540,000 of match and/or related funding is being provided by the Lake and Peninsula



Borough, US Department of Energy, and, State of Alaska, and Alaska Housing Finance Corporation.

***Delivery Method:*** The audits will be performed using ANTHC in-house resources.

***Schedule:***

September 2014 - September 2016: Complete 11 energy audits

October 2016 - October 2017: Complete 16 energy audits

October 2017 - October 2018: Complete 11 energy audits

October 2018 - December 2019: Complete 11 energy audits

**Improvement Projects**

***Scope:*** Implement energy improvement projects based upon previously conducted energy audits in at least the following 61 communities:

Akiak, Alatna, Allakaket, Ambler, Angoon, Anvik, Arctic Village, Atmauthluak, Brevig Mission, Buckland, Chuathbaluk, Circle, Crooked Creek, Deering, Eek, Elim, Fort Yukon, Gambell, Golovin, Grayling, Holy Cross, Hughes, Huslia, Kake, Kaltag, Kipnuk, Kobuk, Koliganek, Kongiginak, Koyuk, Koyukuk, Kwigillingok, Marshall, Minto, Mountain Village, Newhalen, New Stuyahok, Nondalton, Northway, Nulato, Nunam Iqua, Old Harbor, Pilot Station, Pitkas Point, Rampart, Ruby, Russian Mission, Saint Michael, Savoonga, Shageluk, Shaktoolik, Shishmaref, Sleetmute, Stebbins, Stevens Village, Teller, Tuluksak, Twin Hills, Unalakleet, White Mountain.

The improvements will be inclusive of both Energy Efficiency Measures (EEMs) and Energy Conservation Measures (ECMs), which may typically include:

- Replacement of electrical components and circulating pumps.
- Interior and exterior lighting upgrades and installation of occupancy sensors.
- Installation of setback thermostats and tuning of the heating and ventilation systems.
- Mechanical piping insulation.
- Replacement of boilers to more efficient units and upgrade to electronic control systems.
- Weather sealing and building insulation, as necessary.
- Operational changes such as turning off heat tape and circulation pumps when not needed, decreasing circulating and storage tank temperatures, decreasing building interior set points, and appropriate operations and maintenance procedures.

The general criteria for an improvement project package is that it has an average simple payback of 7 years or less.

Construction activities should be less than \$100,000 per community. In the event construction activity exceeds \$100,000 per community, ANTHC must identify the appropriate cost share match before proceeding.



**Deliverables:** Training and retrofit plans in advance of efficiency/conservation implementation work, completed improvements, and trip reports featuring photographs of before and after work for each community receiving efficiency/conservation improvements.

**Budget:** The Commission is making \$2,857,865 available for improvement projects. This represents approximately \$40,000 per community. The US Department of Agriculture and the State of Alaska are providing \$1,900,000 for related work in the communities listed above and/or other communities that have or will receive energy audits. Based on historical ANTHC data, the average cost (including materials, shipping, direct labor, pool labor, travel and indirect costs) to make routine energy improvements for a community with a piped water and sewer system is approximately \$85,000.

**Delivery Method:** The majority of improvement project work will be performed using ANTHC in-house professional and force-account resources. Some elements of the work may be performed via contract or sub-recipient agreements.

**Schedule:**

September 2014 - September 2016: Complete projects in 40 communities

October 2016 – October 2017: Complete projects in 16 communities

October 2017 – October 2018: Complete projects in 5 communities

**Holy Cross Heat Recovery System**

**Scope:** Complete design of a heat recovery system in Holy Cross, Alaska to supply recovered heat from the power plant to the water treatment plant. Complete the design of a heat recovery expansion in Holy Cross, Alaska to supply additional recovered heat from the power plant to the city office.

**Deliverables:** 65% design drawings, 100% design drawings and Construction Cost estimate.

**Budget:** The Commission is making \$60,000 available for the design. The US Department of Energy and the US Environmental Protection Agency are providing \$30,000 for the initial feasibility study and final design. \$60,000 of planning and design effort represents approximately 450 hours of professional time at \$120/hour plus travel and permits. The US Department of Agriculture is providing \$445,300 in grants and loans for construction of the system, with a local contribution of \$40,000 from the City of Holy Cross.

**Delivery Method:** Design documents will be produced by a professional engineering firm competitively procured by ANTHC.

**Schedule:**

September 2016 - Design start:

November 2016 - 65% design complete:



July 2018 - 100% design and cost estimate complete

May 2018 – Added scope Design start:

June 2018 – 65% design complete

July 2018 – 100% design and cost estimate complete

### **Service Line Study**

**Scope:** Conduct assessment of behavioral and technical challenges associated with four common water and sewer service connections used in rural Alaska. Identify energy impact to residences of operating the different type of service connections.

**Deliverables:** Document best practices, and develop a practical tool kit to improve operational performance for residents.

**Budget:** The Commission is making \$25,000 available for the study. ANTHC is contributing a \$25,000 match. The total \$50,000 budget includes approximately \$10,000 for ANTHC labor and indirect costs (110 hours at an overall aggregate rate of approximately \$90 per hour), \$22,000 to support an AmeriCorps Vista volunteer (stipend and host organization administration), \$16,000 for travel (8 trips @ \$2,000/trip), and \$2,000 for materials.

**Delivery Method:** The study will be performed using ANTHC in-house resources and an AmeriCorps Vista volunteer.

### **Schedule:**

January 2016 to December 2016 - Develop assessment, identify communities, collect field data

January 2017 to December 2017 - Assemble data, develop toolkit, produce final report

### **Heat Recovery Investigation**

**Scope:** Using the known data on community power systems, select at least seven communities from different regions of the State to provide an investigation into one of three categories: Initial Heat Recovery Feasibility, Heat Recovery Expansion Feasibility, or Heat Recovery Troubleshooting and Recommendations. Communities selected for investigation will currently either have no heat recovery, faulty heat recovery, or underutilized heat recovery.

**Deliverables:** A report explaining the study, methods, findings, recommendations and cost estimate, and potential funding sources will be produced and provided to the community.

**Budget:** The Commission is making \$140,193 available for the study.



***Schedule:***

Community Solicitation: October 2018  
2 Communities Selected: November 2018  
Community #1 On-site inspection and data gathering: December 2018  
Community #1 Study and Report Complete: February 2019  
Community #2 On-site inspection and data gathering: February 2019  
Community #2 Study and Report Complete: April 2019  
Community #3 On-site inspection and data gathering: April 2019  
Community #3 Study and Report Complete: June 2019  
Community #4 On-site inspection and data gathering: June 2019  
Community #4 Study and Report Complete: August 2019  
Community #5 On-site inspection and data gathering: August 2019  
Community #5 Study and Report Complete: October 2019

**Wind-to-Heat Integration Upgrades**

***Scope:*** Dispatchable electric boilers have been installed in several communities around the state that have wind generators. These electric boilers are used to balance loads during times when production from the wind generators exceeds demand by the community. Over the past several years, ANTHC TUS has determined several ways for improving the integration of these systems.

***Deliverables:*** A trip report featuring photographs of before and after work for each community receiving wind-to-heat upgrades.

***Budget:*** The Commission is making \$89,578 available for the upgrades.

***Delivery Method:*** The work will be performed using ANTHC in-house resources.

***Schedule:***

June 2018 - System assessment  
July 2018 – Material Take off development  
October 2018 – Upgrades implementation

**Cooperative Agreement Provisions**

ANTHC agrees to cooperate and collaborate with the Denali Commission during the project, and understands that the Commission will be substantially involved in implementing the project or components of the project. Specifically, the Commission will participate in, and/or provide direct assistance during the project related to the selection of communities that will receive energy audits and improvement projects, and the delivery method for improvement projects. No cost changes to the original list of communities identified in this Work Plan will not require



an amendment to the Award, provided appropriate documentation is included in the Award file, and the final Close-out Report for this Award clearly identifies all communities served and projects completed.

### **Environmental Documentation**

ANTHC prepared an Environmental Review (ER) document in October 2014 based on the original funding provided by the Commission under Award 1467. The ER was prepared consistent with Indian Health Service procedures, and concluded that the activities undertaken pursuant to this Award would not have a significant impact on the environment. ANTHC has completed a Commission CATEX Checklist based on CATEX B1 (and B2) for the entire scope of work in Award 1467 thru Amendment 3, and the CATEX determination has been approved by the Commission. The work performed under Amendment 4 was consistent with the work previously undertaken and the CATEX B1 determination. The work proposed under Amendment 5 is consistent with the work previously undertaken and the CATEX B1 determination

### **Overall Budget and Funding Summary**

An overall budget and funding summary dated 6 April 2018 is presented on page 7 of this document.



BUDGET				
Line	Item	By	Amount	Basis/Notes
1	Direct Burdened Labor	ANTHC	\$997,988	17,742 hours @ average rate of \$56.25 per hour
2	Pool Labor <sup>b</sup>	ANTHC	\$399,195	Rural Utility Department support staff; \$24.00 per hour of direct department labor Rural Energy Department support staff: \$7.50 per hour of direct department labor Shipping & Receiving Department support staff: \$32.00 per hour of direct department labor \$22.50 weighted average pool rate x 17,742 hours
3	Travel	ANTHC	\$422,500	Audits - 49 trips, 2 people each trip; Projects - 65 trips, 2 people each trip; Service Line Assessments - 4 trip, 2 people each trip; Heat Recovery Investigations- 7 trips, 2 people each trip; Wind To Heat Upgrades - 5 trips, 2 people each trip assume \$1,625 per person per trip
4	Materials & Freight	ANTHC	\$1,419,740	\$16,520 for materials and \$3,262 for shipping per community x 70 communities, Wind to Heat - \$35,000 for Materials and Freight
5	Consultant Services	Subcontractors	\$82,000	\$60,000 for Holy Cross design A/E \$22,000 to support AmeriCorps Vista volunteer on service line study
6	Subtotal		\$3,321,423	
7	Contingency		\$69,730	2.1% of line 6
8	Indirect Costs <sup>c</sup>	ANTHC	\$256,483	25.7% of line 1
9	Total		\$3,647,636	

**Additional Notes**

a. Budget developed by Cody Uhlig at ANTHC

b. Current pool rates in accordance with October 2015 ANTHC/DEHE Project Cost Allocation Methodology

c. ANTHC has a federally negotiated indirect rate of 25.7 % dated 8 November 2016 from the US Department of Health and Human Services

d. Overall labor rate including direct labor, pool labor and indirect costs = \$1,653,666/17,742 hours = \$93.21 per hour

FUNDING				
Line	Source	Award or Reference	Amount	Notes
10	Original Award	1467	\$2,147,636	
11	Amendment 1	1467	\$0	
12	Amendment 2	1467	\$0	
13	Amendment 3	1467	\$500,000	
14	Amendment 4	1467	\$500,000	
15	Amendment 5	1467	\$500,000	This action
16	Total Funding Available As Of This Action		\$3,647,636	